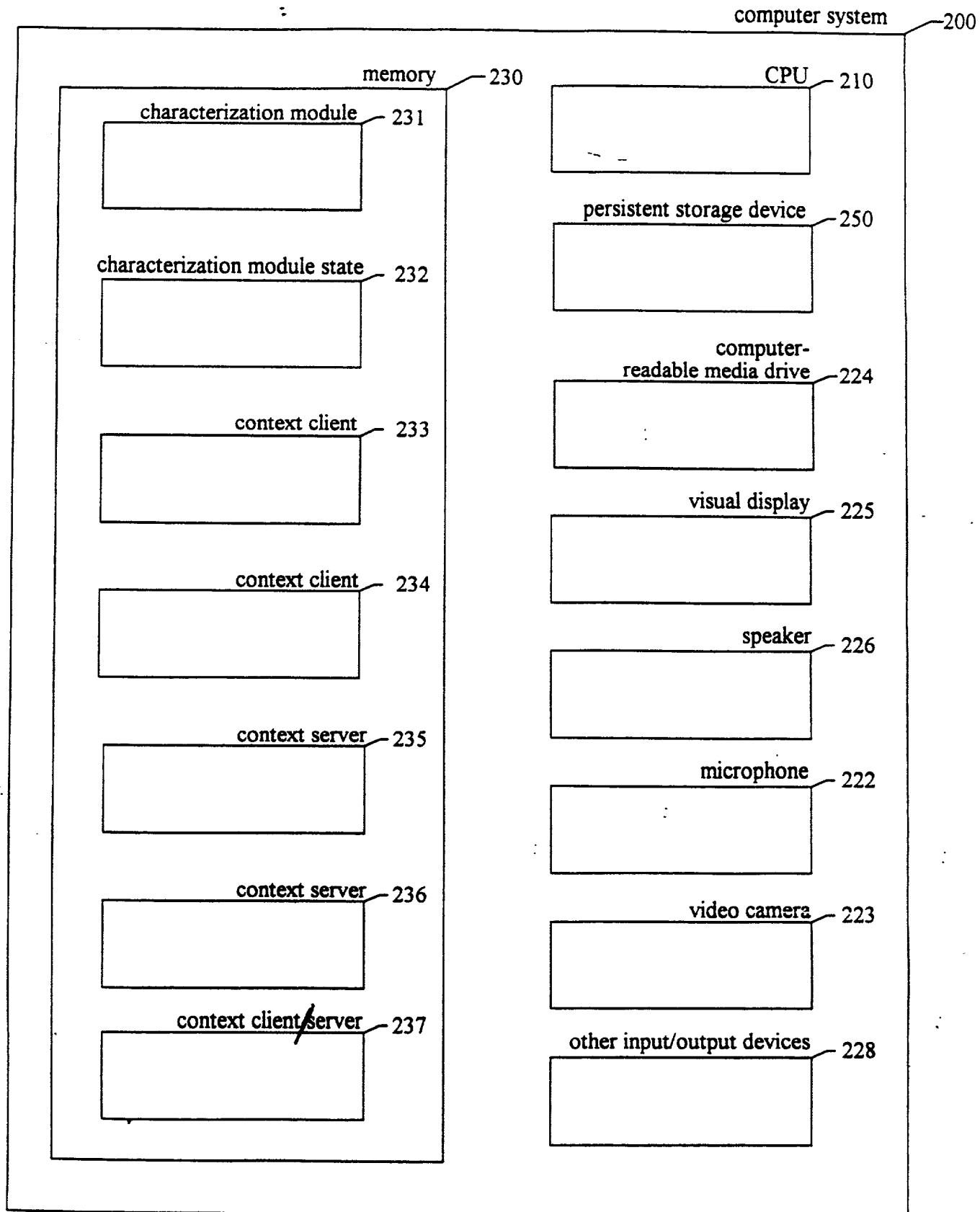
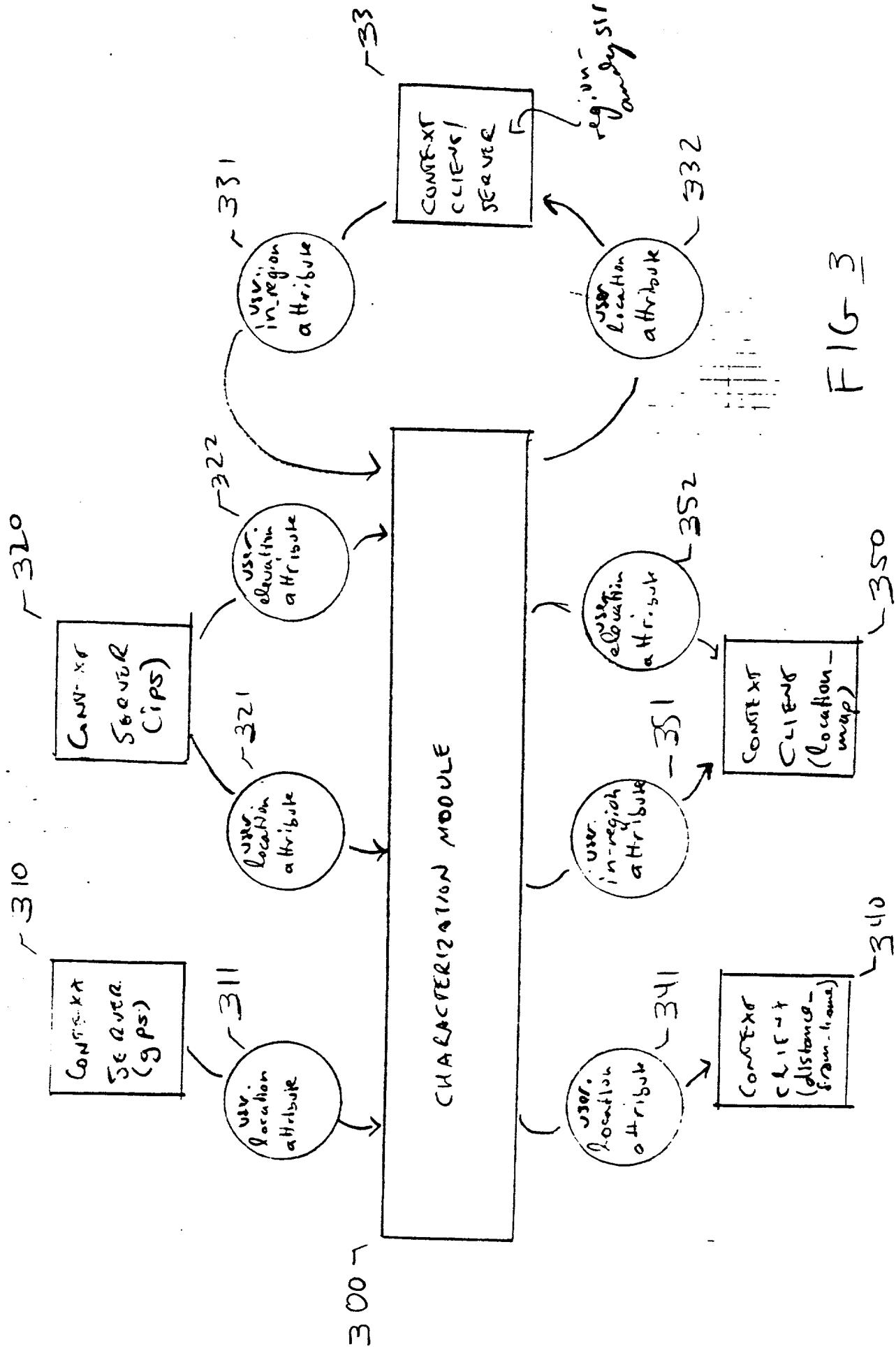


**Fig. 1**



*Fig. 2*



context server table				
context server name	version	installation date	filename	request handler
gps	1	2/10/2000	gps.exe	(reference)
ips	1	2/21/2000	ips.exe	(reference)
location_region_analysis	1	2/10/2000	l_r_a.exe	(reference)

FIG 4

attribute instance table					
attribute name	context server name	value	uncertainty	timestamp	units
user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes
user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes
user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters
user.in_region	location_region_analysis	none	none	none	none

ELG 514 515 516 517

Context Client Table		
Context Client Name	Message Handler	Context Client Table
location map	(reference)	
distance from home	(reference)	
region analysis	(reference)	

FIG 6

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一一九

context client name

10

## message handler

## Context client table

attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
user.elevation	ips	22	.5	13:11:01.118 2/22/2000	meters	1
user.in_region	location_region_analysis	none	none	none	none	1

FIG 7. -

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L711

— 714 —

→ 716 → 717

7

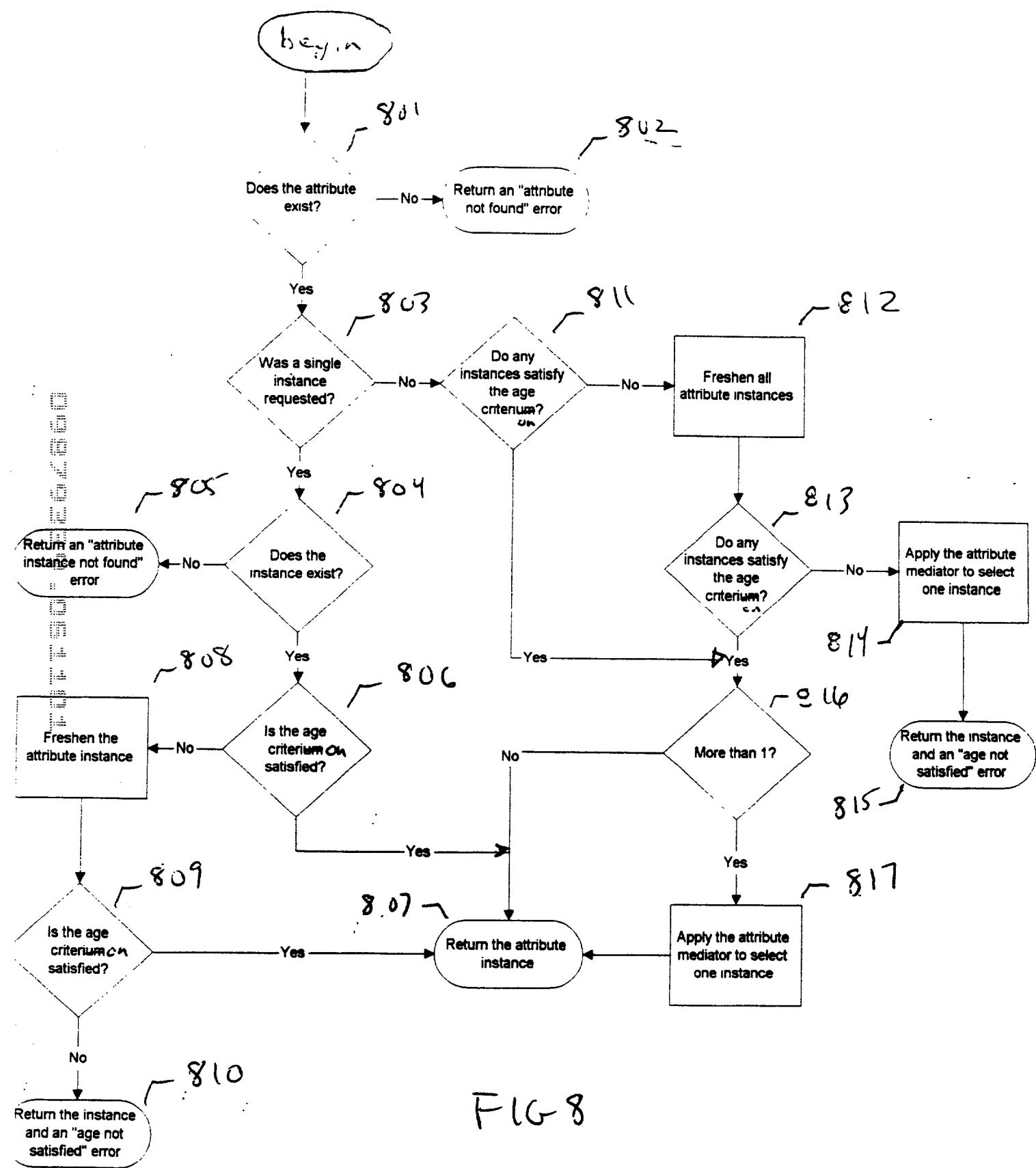


FIG 8

900

attribute instance table

attribute name	context server name	value	uncertainty	timestamp	units	number of context clients consuming
user.location	gps	47° 38.73' N, 122° 18.43' W	0° .09'	13:11:04.023 2/22/2000	degrees/minutes	2
user.location	ips	47° 38.745' N, 122° 18.424' W	0° .021'	13:11:01.118 2/22/2000	degrees/minutes	2
user.elevation	ips	22.25	.5	13:11:06.565 2/22/2000	meters	1
user.in_region	region analysis	none	none	none	none	1

901 911 912 913 914 915 916 917

FIG 9

905

condition table

condition name	context client name	first logical parameter	second logical parameter	comparison value	logical operator
in_region_true	region_analysis	user.in_region	none	TRUE	=

1001 1011 1012 1013 1014 1015 1016

FIG 10

## condition monitor table ↵ 100

condition monitor name	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
region_boundary_crossed_s	region_analysis	in_region_true	TRUE or FALSE	30	13:11:29.101 2/22/2000	(reference)	no

110 ↵ 111 ↵ 112 ↵ 113 ↵ 114 ↵ 115 ↵ 116 ↵ 117 ↵ 118

FIG 11

## condition monitor table ↵ 1200

condition monitor name	context client name	condition name	behavior	frequency	condition last evaluated	trigger handler reference	stopped
region_bounday_crossed_s	region_analysis	in_region_true	TRUE or FALSE	30	13:11:59.101 2/22/2000	(reference)	yes

120 ↵ 121 ↵ 122 ↵ 123 ↵ 124 ↵ 125 ↵ 126 ↵ 127 ↵ 128

FIG 12

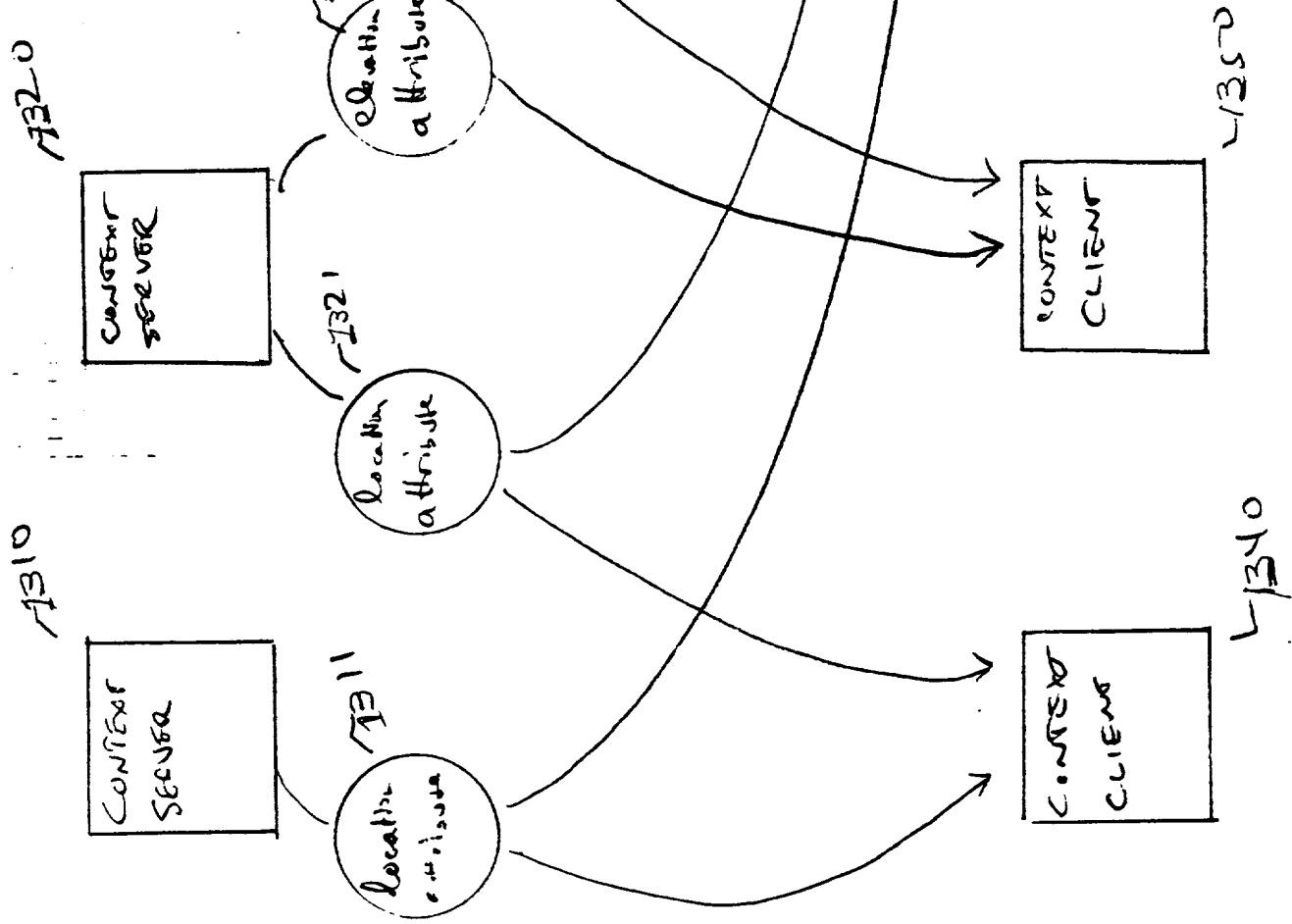


Fig 13

attribute request table

attribute name	context client name
user.location	distance_from_home
user.in_region	location_map
user.location [gps]	location_region_analysis
user.elevation	location_map

Figure 14

User.	Desired_privacy_level Interruptibility Speed Direction Acceleration Availability. Cognitive_availability Tactile_availability Manual_availability Visual_availability Oral_availability Auditory_availability Proximity.<Item or place name> Mood. Happiness Sadness Anger Frustration Confusion Activity. Driving Eating Running Sleeping Talking Typing Walking Location. Place_name Latitude Longitude Altitude Room Floor Building Address Street City County State Country Postal_Code Destination. (same as User.Location.) Physiology. Pulse Body_temperature Blood_pressure Respiration Person.<name or ID>. (same as User.) Platform.	Platform. (continued) CPU. Load Speed Memory. Total_capacity Used Storage. Total_capacity Used Connectivity. Connection_status Connection_speed Connection_type/device Connection_activity Power. Power_source Power_level Environment. People. Nearest Number_present Number_close Local. Time Date Temperature Pressure Wind_speed Wind_direction Absolute_humidity High_forecast_temperature Low_forecast_temperature People_present Ambient_noise_level Ambient_light_level Days.<previous or future>. High_temperature Low_temperature Precipitation_type Precipitation_amount Place.<place name>. (same as Environment.Local) Application. Mail. Available New_messages_waiting Messages_waiting_to_be_sent Phone. Available In_use On/off Notification_mechanism Call_incoming Caller_ID Sound_recorder. Available Recording
		Fig. 15

1) User Setting

- a) Mental Context
  - i) Meaning
  - ii) Cognition
    - (1) Divided User Attention
    - (2) Task Switching
    - (3) Background Awareness
  - iii) Solitude
  - iv) Privacy
    - (1) Desired Privacy
    - (2) Perceived Privacy
  - v) Social Context
  - vi) Affect
- b) Physical Situation
  - i) Body
    - (1) Biometrics
    - (2) Posture
    - (3) Motion
    - (4) Physical Encumbrment
      - (a) Senses
        - (i) Eyes
        - (ii) Ears
        - (iii) Tactile
        - (iv) Hands
        - (v) Nose
        - (vi) Tongue
      - (b) Workload demands/effects
      - (c) Interaction with computer devices
      - (d) Interaction with people
      - (e) Physical Health
    - ii) Environment
      - (1) Time/Space
      - (2) Objects
      - (3) Persons
        - (a) Audience/Privacy Availability
          - (i) Scope of Disclosure
          - (ii) Hardware affinity for privacy
          - (iii) Privacy Indicator for User
          - (iv) Privacy Indicator for Public
          - (v) Watching Indicator
          - (vi) Being Observed Indicator
      - (4) Ambient Interference
        - (a) Visual
        - (b) Audio
        - (c) Tactile

Fig. 16

Fig. 17

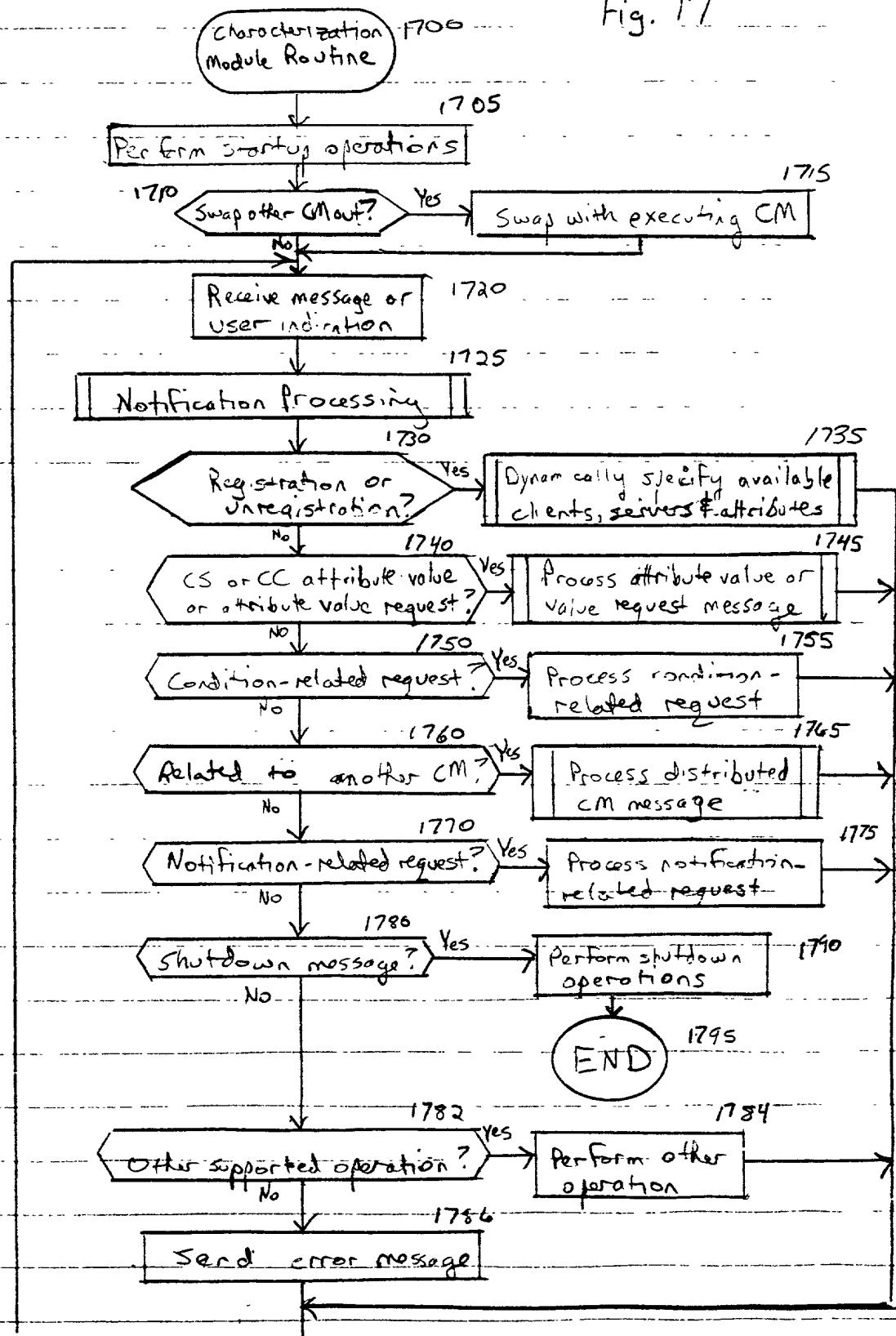
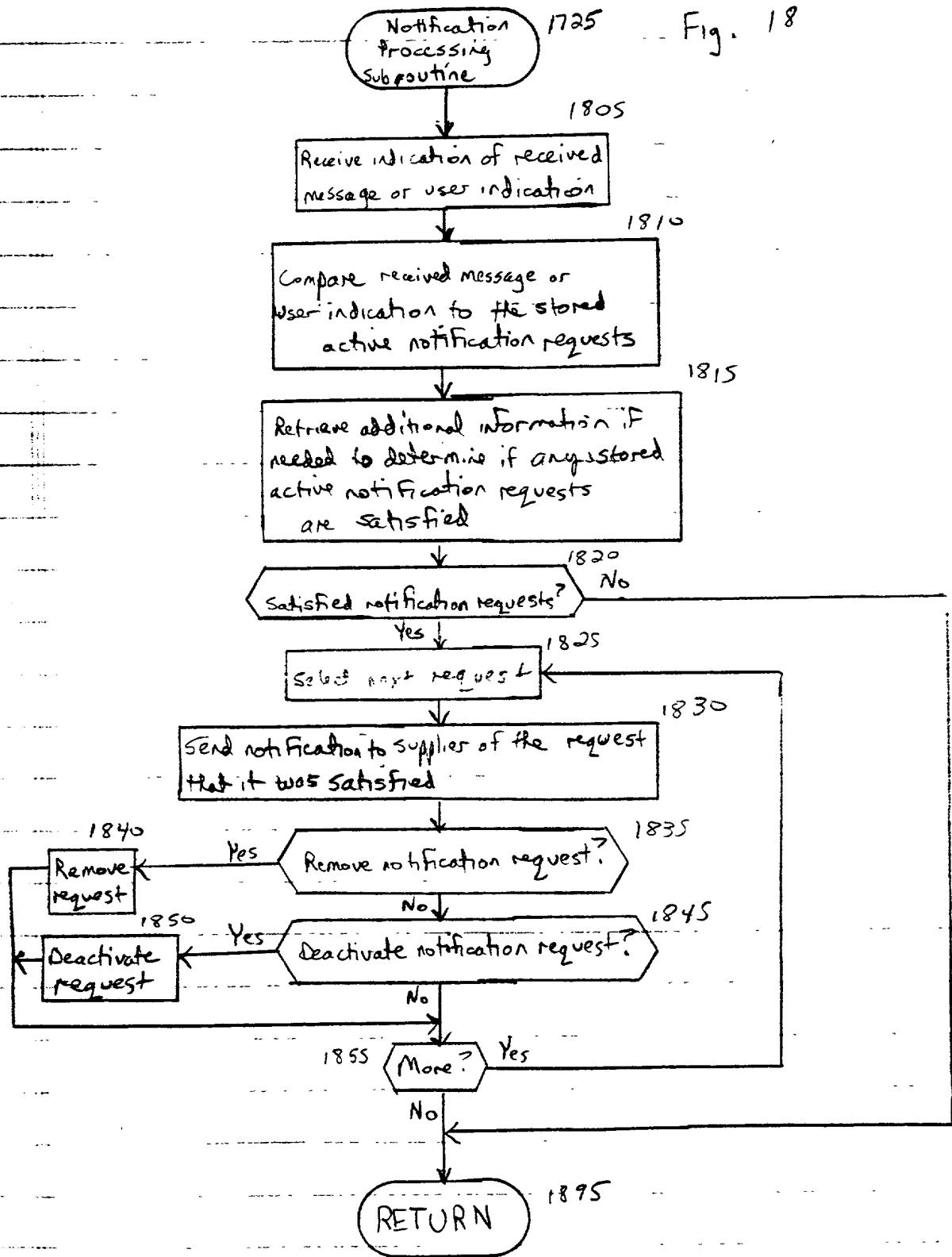
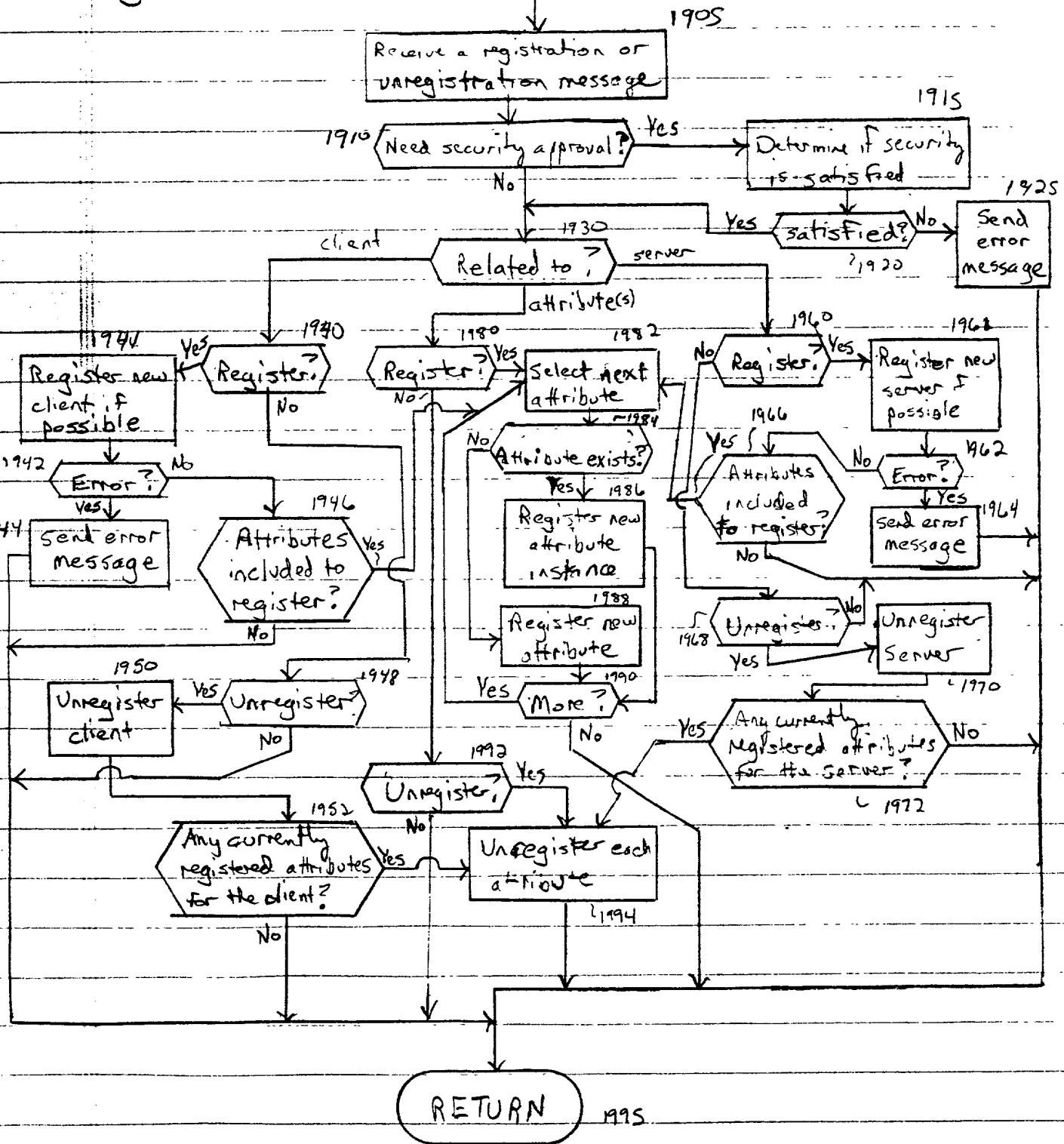


Fig. 18



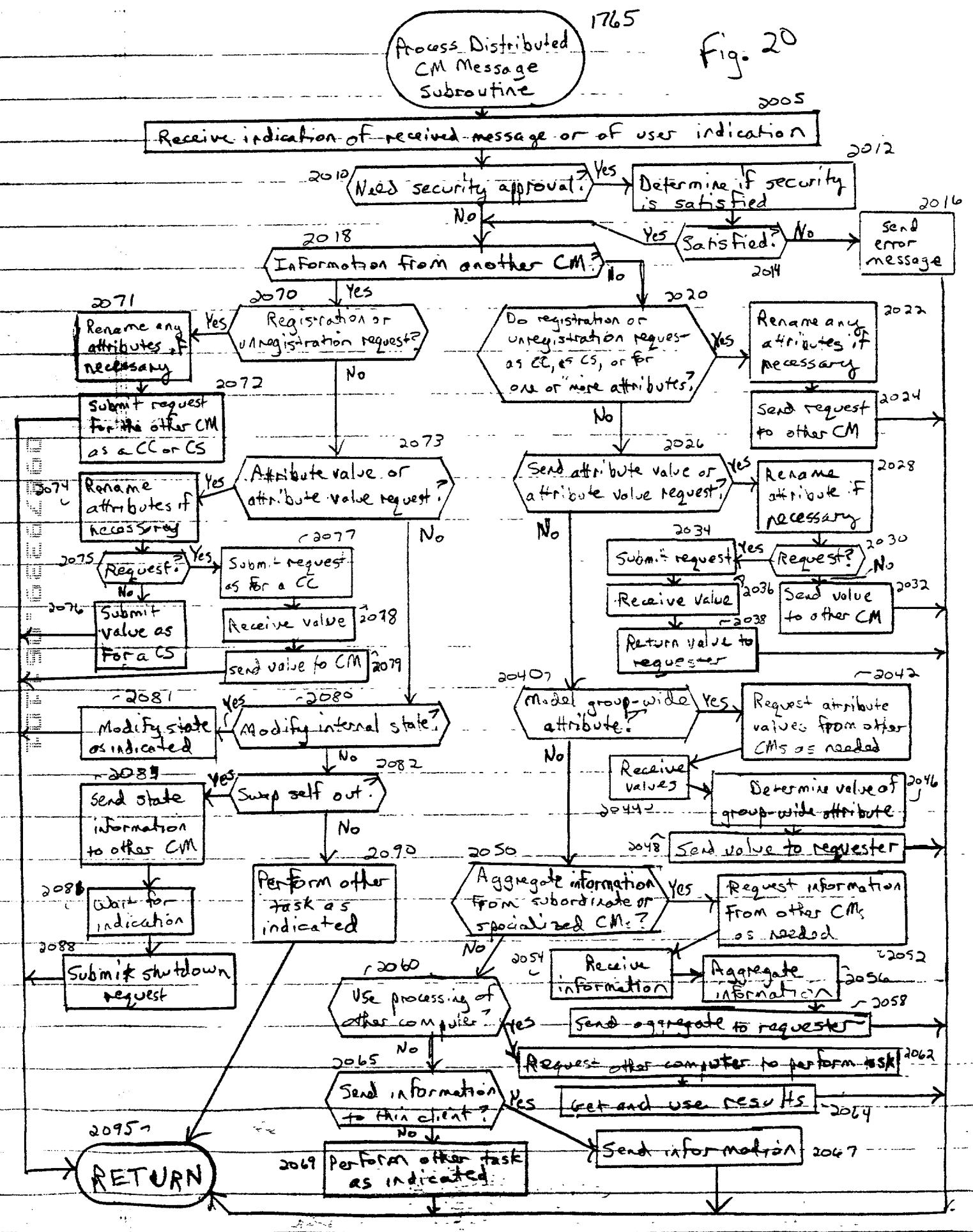
Dynamically Specify Available  
Clients, Servers, & Attributes  
Subroutine

Fig. 19



1765  
Process Distributed  
CM Message  
Subroutine

Fig. 20



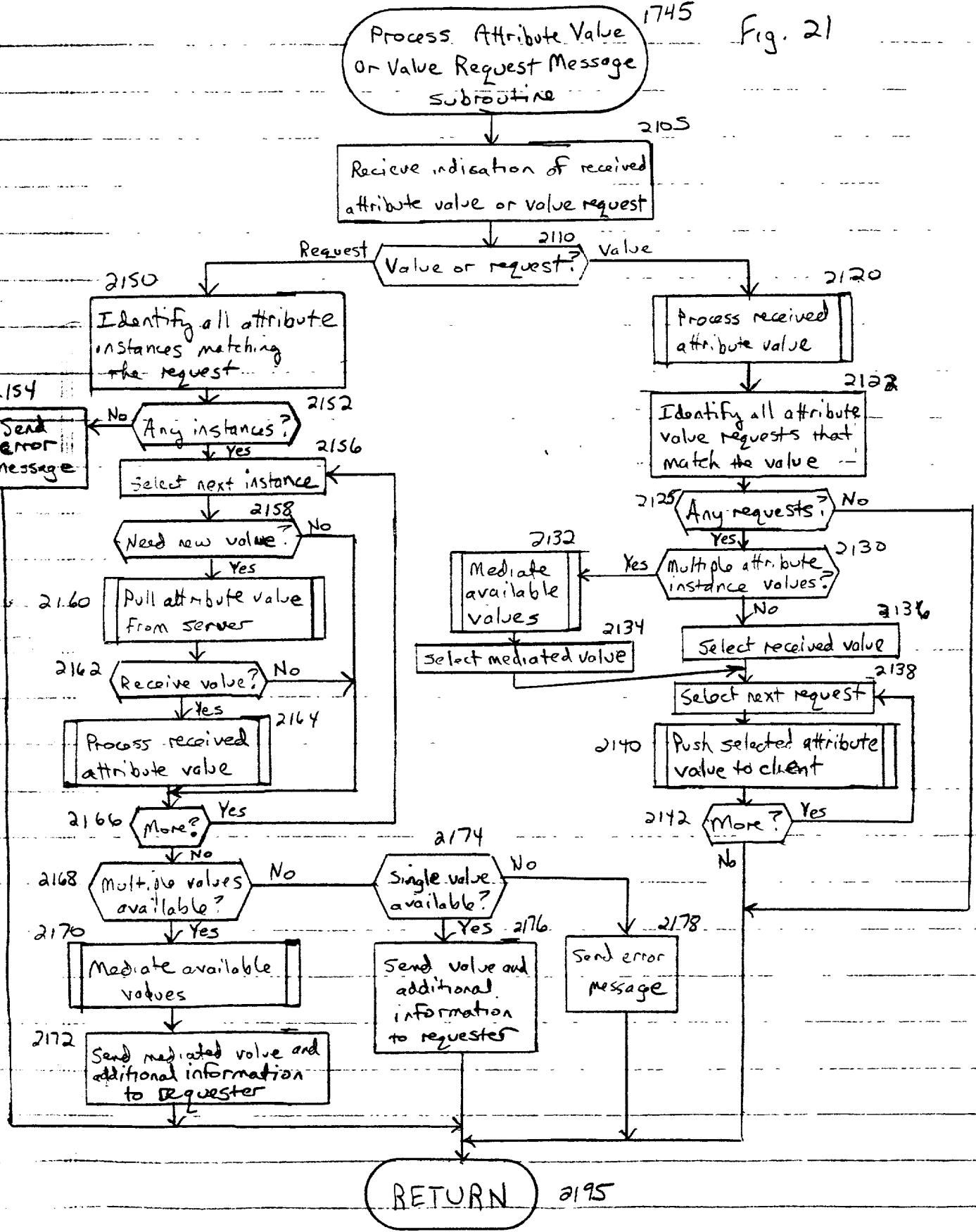


Fig 22

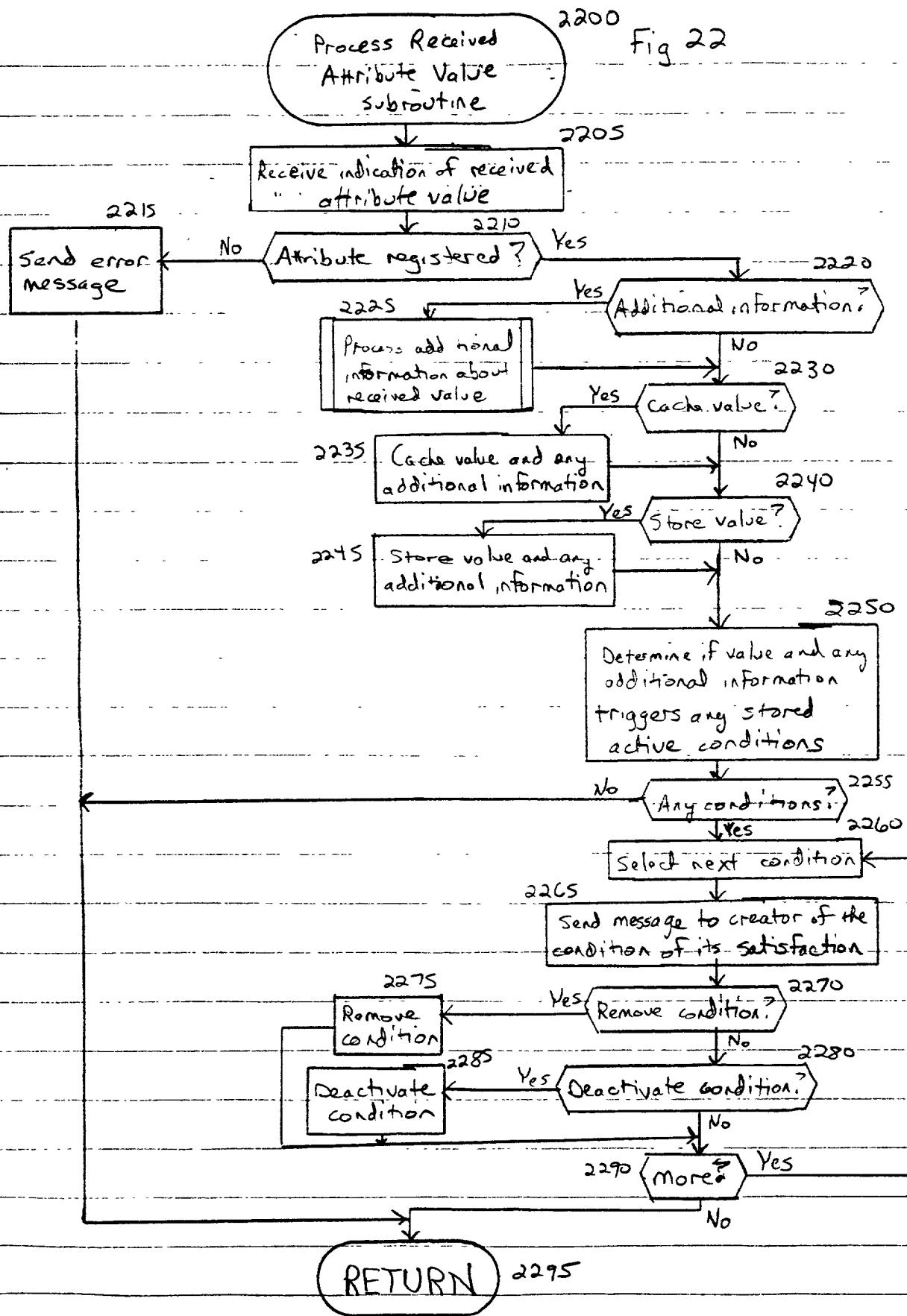


Fig. 23

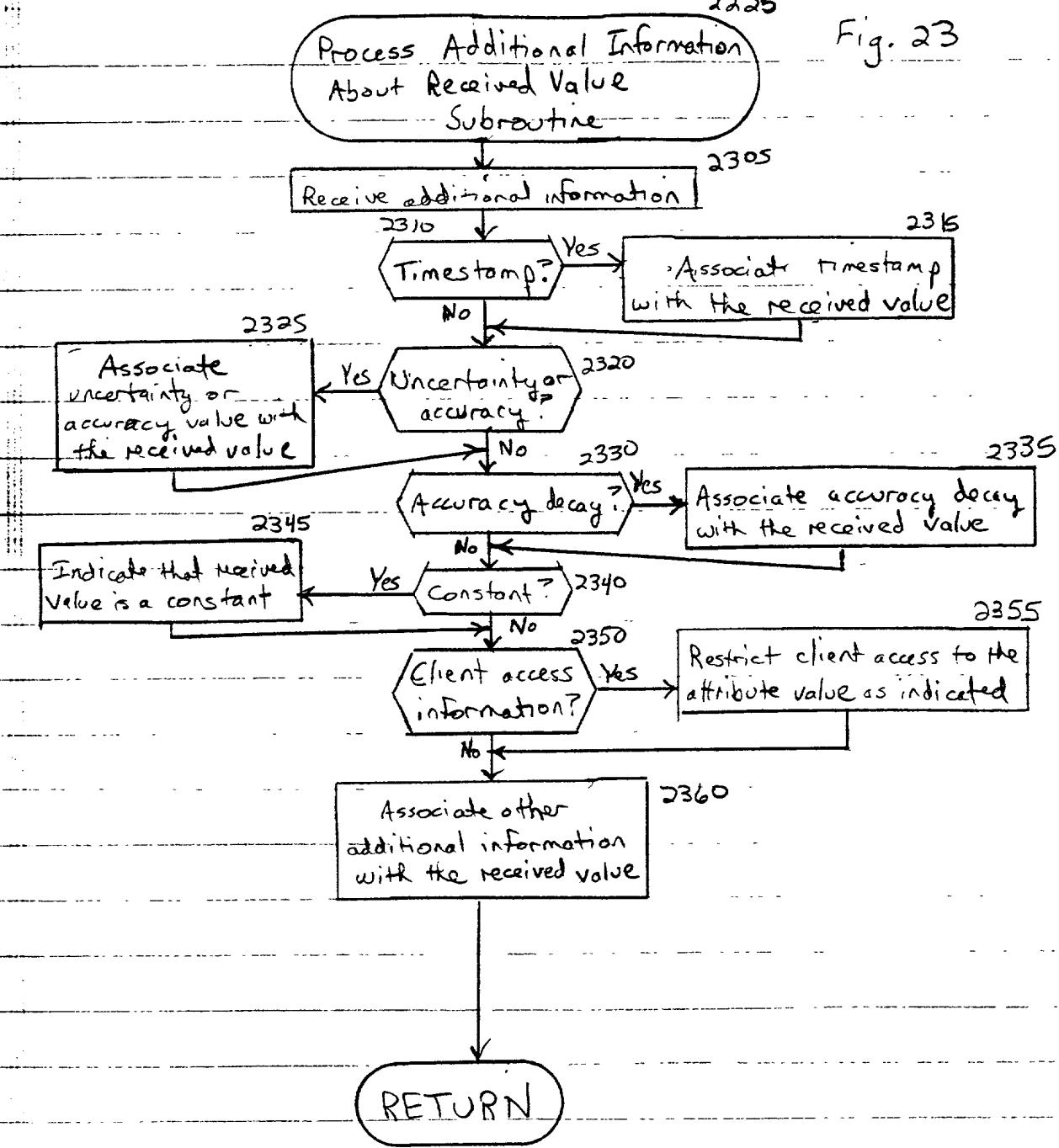
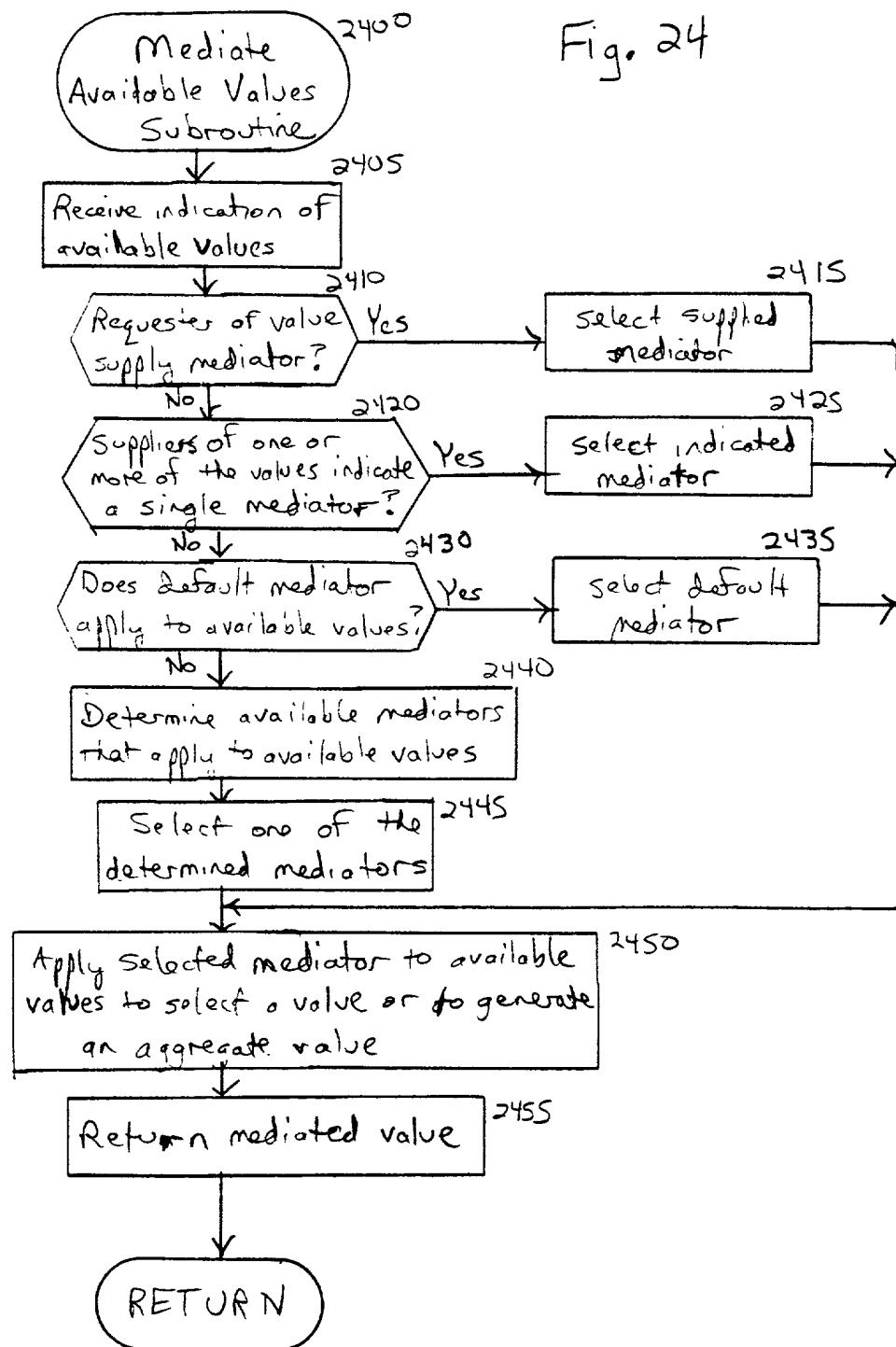


Fig. 24



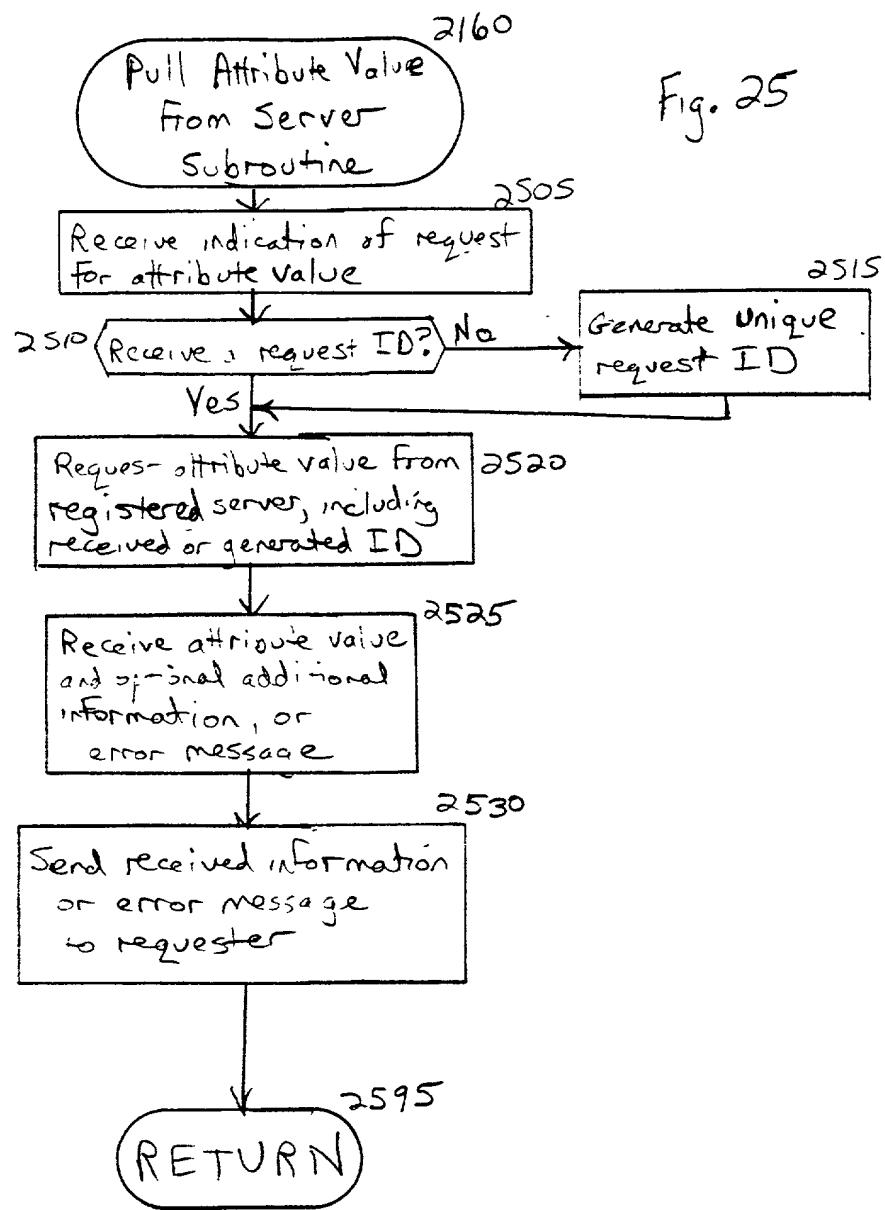


Fig. 25

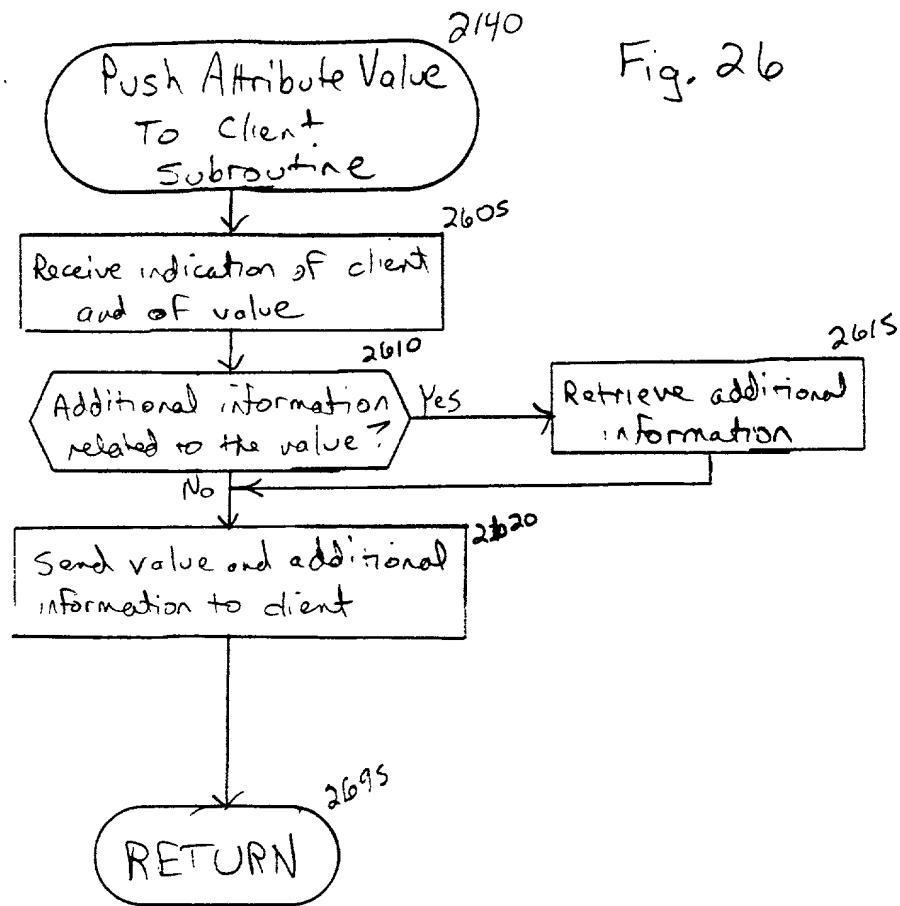


Fig. 26

Fig. 27

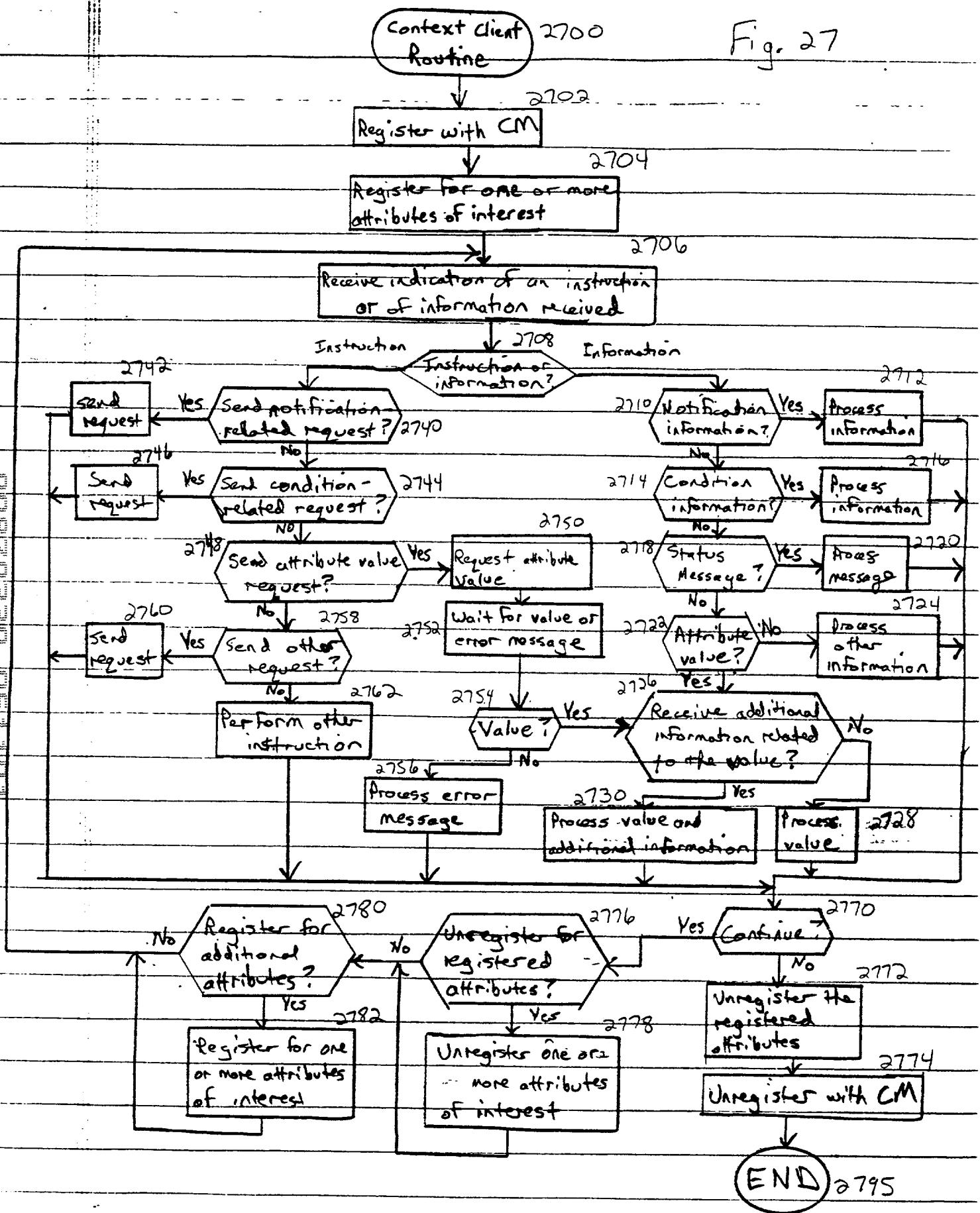


Fig. 28

